

CLIMATOLOGICAL DATA FOR NOVEMBER, 1912.

DISTRICT NO. 3, OHIO VALLEY.

PROF. FERDINAND J. WALZ, District Editor.

GENERAL SUMMARY.

Pleasant weather, which prevailed throughout October, continued during the greater portion of November, thus making a fall season favorable for gathering crops and all outdoor activities of six weeks or more in length. Sunshine was abundant and much above the normal, and there were very few rainy and no severely stormy days.

Average temperature was above normal over the northern half, but below normal over the southern half of the district, while precipitation was deficient and light in all sections. In many extended localities this shortage, following that of October, caused the growth of wheat to be much retarded from want of sufficient moisture, and while the clear dry weather was ideal for gathering corn, it prevented the stripping of tobacco and the preparation of that crop for market. Also there was a scarcity of stock water in some sections, particularly in Kentucky.

Extremes of temperature were well within the records of those experienced in previous years in November, except that 1° at Mountain City, Tenn., and 2° at two stations in West Virginia on the 29th are the November minimum temperature records for those States. A noteworthy feature in temperature distribution was the fact that the lowest registrations were made in the southern Appalachian section rather than in the more northerly and westerly parts of the district.

Snowstorms were less numerous than usual and the fall was much under normal. No snow of consequence fell until the 24th, and then not sufficient in quantity to cover the ground save over a few limited areas in Ohio and West Virginia.

The month was remarkably free from storms common to November, only three barometric disturbances crossing the Ohio Valley which were in any way extensive or potent. These occurred about the 6th, 12th, and the 22d-23d, respectively. The latter passed well to the north and later joined another storm moving up the Atlantic coast; hence the northern and eastern portions of the district were most affected.

The following table summarizes the chief features of meteorological interest for the several sections of the district:

Portions of States included in the Ohio River Basin.	Temperature.				Precipitation.						
	Average.	Departure.	Highest.	Lowest.	Average.	Departure.	Greatest monthly.	Least monthly.	Greatest in 24 hours.	Average number of days.	Average snowfall.
New York.....	41.0	+3.0	70	11	2.35	-0.18	2.42	2.20	0.75	10	7.6
Pennsylvania.....	42.3	+1.8	81	12	1.43	-1.48	3.17	0.61	1.83	8	1.2
Maryland.....	39.3	+1.1	68	10	2.16	-0.27	2.39	2.01	1.64	7	1.6
West Virginia.....	42.7	-0.3	78	2	1.71	-0.95	4.08	0.63	2.90	6	1.0
Ohio.....	42.4	+1.3	82	8	1.02	-1.65	2.40	0.24	1.57	5	0.4
Indiana.....	43.0	+0.4	78	10	1.60	-1.77	3.54	Trace	1.81	5	0.5
Illinois.....	44.0	+1.1	78	13	1.92	-1.12	2.97	1.22	1.32	4	0.1
Kentucky.....	45.2	-0.6	82	10	1.22	-2.00	2.30	0.32	1.58	4	0.2
Tennessee.....	45.7	-2.3	80	1	1.45	-2.06	2.97	0.25	1.66	4	0.8
Alabama.....	45.7	-5.1	78	15	1.24	-2.00	2.45	0.62	1.00	4	0.9
Georgia.....	44.8	-3.8	71	16	2.44	-1.32	2.44	0.12	1.03	6	2.0
North Carolina.....	42.3	-2.7	80	4	2.53	-0.82	4.43	1.73	1.95	5	4.0
Virginia.....	40.1	-2.7	73	0	1.94	-0.67	3.20	1.60	1.90	6	1.8

TEMPERATURE.

For the month as a whole temperatures over the northern half of the district averaged slightly above normal, the departures for the several sections ranging between +0.4° and +3°, while over the southern half they were under normal, with departures ranging from -0.6° for Kentucky to -5.1° for northern Alabama.

The month opened with cloudy, rainy weather and mild temperature over most of the district, due to the passage of a deep barometric disturbance which had moved from eastern Texas across the central valleys to the lower Lake region. A rapid reaction to colder quickly followed the passage of this disturbance, and during the 2d-4th unseasonably cold weather was experienced, with mean temperatures ranging from 5° to 16° below normal and minimum temperatures from 10° to 20° below freezing. The 14th-17th and 24th-28th were the only other periods of cold weather experienced during the month.

The lowest temperatures of the month were registered, as a rule, on the 28th or 29th, when minimum temperatures for the various sections or parts of sections of the district ranged from 0° to 16°, the lowest occurring in the mountain sections of West Virginia, southwestern Virginia, Tennessee, and western North Carolina. The lowest temperatures in Kentucky and sections north of the Ohio River ranged from 8° to 13°. The lowest in northern Alabama was 15° and in northern Georgia 16°. There were two periods of unseasonably warm weather, one stretching from the 5th to the 13th and the other from the 19th to the 23d. Maximum temperatures registered in the 70's and 80's quite generally on the 6th, 10th, 11th, and 12th, which were the warmest days.

PRECIPITATION.

Rainfall for the month was generally deficient in all sections. The greater amounts, as a rule, occurred over the eastern border sections and the Wabash Valley, where the totals for the month ranged between 2 and 4 inches. Over central sections, particularly large areas in Ohio, southeastern Indiana, Kentucky, and Tennessee, the amounts at the various stations totaled generally less than 2 inches, or only about one-half of the normal for November. Furthermore, there were extensive areas in these sections which received less than an inch, quite a few stations less than half an inch, and one station only a few sprinkles.

The average monthly amounts for the various sections or parts of sections in the district ranged only between 1.02 and 2.53 inches, and the extreme limits in the monthly amounts for all stations were 4.43 inches at Highlands, N. C., and a trace at Greensburg, Ind. The number of rainy days was exceptionally small for November, also nearly all of the precipitation occurred the first half of the month and a very large proportion on the 6th and 7th. There were four distinct precipitation periods, namely, 1st-2d, 5th-8th, 12th-15th, and 23d-25th. The precipitation falling on the 24th and 25th was mostly snow.

Except in the mountain districts, where there were from 1 to 8 inches, the snowfall was unusually light for Novem-

ber. The larger amounts occurred in the mountain sections of North Carolina and Tennessee, while over most of the central and western sections of the district there were only flurries of snow and in the immediate lower Ohio Valley there was none at all. Snow, mostly flurries, fell over the larger portion of the district on the 24th, and on the 27th and 28th a snowstorm of considerable severity swept over eastern and southeastern sections.

MISCELLANEOUS.

Sleet fell in Ohio on the 9th and in West Virginia on the 9th, 14th, and 15th. Thunderstorms occurred on the 1st

in Illinois and southwestern Virginia, and on the 12th-13th in Illinois and Indiana. On the 1st the storm which occurred at Metropolis, Ill., was severe and caused considerable local damage, while that occurring at Martinsville, Ill., the evening of the 12th was tornadic and very destructive, causing the death of one person, serious injury to 3 persons, and a property loss of \$60,000 or more. Forest trees were torn up and many houses and barns demolished, electric service was put completely out of commission, and roads and highways were clogged with fallen poles and wires. Railroad trains were delayed by obstructions blown on the tracks.

TABLE 1.—Climatological data for November, 1912. District No. 3, Ohio Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.			Departure from the normal.			Greatest daily range.			Total.							
				Highest.	Date.	Lowest.	Date.	Greatest.	Date.	Total.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.				
<i>New York.</i>																				
Allegany.....	Cattaraugus.....	1,441	6	41.5	70	6†	11	28	44	2.20	-0.18	0.48	8.1	12	10	5	15	nw.	Charles E. Whitney.	
Bolivar.....	Allegany.....	1,800	18	39.6	+ 3.0	68	6†	13	28	35	2.42	-0.18	0.75	8.8	8	8	7	15	w.	Charles F. Hoffman.
Olean.....	Cattaraugus.....	1,402	4							2.42		0.52	6.0	11					w.	John W. Alles.
<i>Pennsylvania.</i>																				
Aleppo.....	Green.....	1,135	11	42.7	+ 1.6	70	6	19	29	33	1.60	-0.29	0.97	T.	6	14	1	15	nw.	J. S. Hinerman.
Baldwin.....	Butler.....	1,404	6	41.8		68	10	25	25†	31	1.32	-0.28	0.80	1.0	5	8	7	15	w.	S. H. Templeton.
Beaver Dam.....	Beaver.....	674	18							0.62	-0.28	0.35	0.2	7	8	2	20	sw.	U. S. Engineers.	
Brookville.....	Jefferson.....	1,173	21							2.00	-1.22	0.60	1.1	6	5	0	25	w.	H. C. Bartholomew.	
Clarion.....	Clarion.....	1,078	27							1.01	-1.73	0.60	1.1	7	11	8	11	w.	J. A. Miller.	
Claysville.....	Washington.....	1,127	8	43.4		72	6	18	28	32	1.03	-0.28	0.55	T.	5	7	5	15	ne.	E. T. Buchanan.
Confluence.....	Somerset.....	1,352	28							1.86	-1.31	0.98	T.	5	7	5	15	ne.	Grant Pyle.	
Franklin.....	Venango.....	955	38	42.5	+ 3.0	81	7	20	29	41	1.56	-1.65	0.40	2.0	11	10	1	19	sw.	F. E. Dixon.
Freepoint.....	Armstrong.....	772	39							1.20	-1.93	0.90	0.6	9	4	1	25	sw.	Mrs. Anna R. Burtner.	
Greensboro.....	Green.....	768	23							1.16	-1.69	0.56	0.5	7	14	6	10	sw.	James G. Cramer.	
Greenville.....	Merger.....	950	16	41.1	+ 2.7	69	6	16	28	32	1.55	-1.26	0.46	2.0	8	15	5	10	nw.	A. M. Orr.
Indiana.....	Indiana.....	1,350	15	42.4	+ 1.3	73	6	18	29	30	1.33	-1.53	0.91	1.0	4	6	10	14	w.	R. W. Wehrle.
Johnstown.....	Cambria.....	1,184	24	44.0	+ 2.4	75	6	22	29†	36	1.68	-1.52	0.80	1.0	12	10	8	12	nw.	E. C. Lorentz.
Lock No. 4.....	Washington.....	718	26							1.38	-1.15	0.98	0.2	8	7	11	12	s.	R. T. McGowan.	
Lycellips.....	Westmoreland.....	1,420	20	42.6	+ 0.6	62	6†	23	29†	26	0.98	-1.56	0.66	0.6	6					Murray Forbes.
Pittsburgh.....	Allegheny.....	842	42	44.1	+ 1.2	70	6	25	28	35	0.80	-1.75	0.67	0.3	6	9	7	14	w.	U. S. Weather Bureau.
Saegerstown.....	Crawford.....	1,116	21	41.1	+ 2.8	68	6	12	28	29	1.56	-1.99	0.50	4.0	10	6	5	19	sw.	J. P. Apple.
Sharon.....	Mercer.....	940	1	42.8		69	6	22	28	26	1.03		0.33	0.2	9	12	2	16	sw.	Norman S. Powell.
Skidmore.....	Lawrence.....	1,000	8	40.3		69	6	17	29	29	0.85		0.75	1.0	2	12	4	14	sw.	W. H. Stoner.
Somersett.....	Somersett.....	2,250	56	39.6	+ 1.0	67	6†	15	29	32	3.17	-0.27	1.58	2.5	10	0	15	15	nw.	W. M. Schrock.
Uniontown.....	Fayette.....	999	24	44.6	+ 1.4	73	6	22	4	32	1.17	-2.18	0.60	1.0	6	2	12	16	nw.	Wm. Hunt.
Warren.....	Warren.....	1,137	23	40.4	+ 1.6	70	6	18	30	38	2.50	-0.98	0.58	6.2	13	10	1	19		Anna Simpson.
<i>Maryland.</i>																				
Deer Park.....	Garrett.....	2,457	18	38.4	+ 0.4	67	6	10	4†	44	2.09	-0.39	1.57	1.5	5	12	8	10		S. P. Specht.
Grantsville.....	do.....	2,351	18	40.1	+ 0.5	66	6	18	29	36	2.01	-0.55	1.52	1.5	6	11	7	12	w.	J. S. Miller.
Oakland.....	do.....	2,461	12	39.4	+ 2.4	68	6	12	4	42	2.39	+ 0.12	1.64	1.9	11	11				R. E. Weber.
<i>West Virginia.</i>																				
Bancroft.....	Putnam.....	574	10	41.4	- 3.7	70	10†	19	29	38	1.28	-1.02	0.54	0.2	6	16	0	14		R. E. Dent.
Beckley.....	Raleigh.....	2,440	13	40.6	- 1.7	69	13	8	29	38	4.03	+ 1.76	2.00	6.0	6	17	6	7	w.	John A. Ewart.
Bene Run.....	Pleasants.....	622	10	43.2	+ 0.3	71	6†	21	29	33	1.39	-1.14	0.84	0	5	24	2	4		J. D. Riggs.
Bluefield.....	Mercer.....	2,563	17	43.4	- 0.9	70	12	29	38	39	1.49	-1.19	1.20	0	2	21	1	8		Norfolk & Western Ry.
Buchannon.....	Upshur.....	1,472	21	42.1	+ 1.1	78	7†	15	4†	38	1.75	-1.69	1.75	T.	1	16	2	12		H. A. Darnall.
Cairo.....	Ritchie.....	667	10	43.0	- 0.4	75	13†	29	45	45	1.12	-1.47	0.55	T.	4	6	12	12	w.	Van A. Zevely.
Central Station.....	Doddridge.....	900	11	46.4		73	12	18	29	40	1.27	-1.24	0.75	T.	5	8*	11*	10*	w.	G. W. Sherwood.
Charleston.....	Kanawha.....	598	25	47.4		73	11†	26	4†	37	1.36	-1.57	0.83	1.0	6	12	3	15	w.	R. C. Hewes.
Creston.....	Wirt.....	612	11	42.4	- 0.5	72	11	15	29	41	1.22	-1.08	0.59	T.	5	10	6	14	w.	J. M. Reed.
Cuba.....	Jackson.....	544	11	43.2	+ 0.1	74	6	15	28	44	0.83	-1.25	0.59	T.	3	10	13	7	nw.	C. T. Perry.
Doane.....	Wayne.....	6	47.5			78	1	31	16†	36	0.88		0.39	0	6	20	4	6		L. A. Smith.
Elkhorn.....	McDowell.....	1,933	20	42.8	- 1.9	70	11†	14	29	43	3.84	+ 1.23	2.50	2.7	6	18	1	11	sw.	J. J. Lincoln.
Elkins.....	Randolph.....	1,940	13	40.6	+ 1.1	69	12	21	29	42	1.26	-0.40	1.66	0.6	10	8	2	13	w.	U. S. Weather Bureau.
Fairmont.....	Marion.....	879	19	42.4		72	12	21	40	40	1.20	-1.57	0.64	0.4	7	17	2	11	w.	F. P. Hall.
Glenville.....	Gillmer.....	738	23	44.6*	+ 1.4	78	12*	15	29	42	2.38	-0.65	1.05	0.2	6	17	1	12	w.	Joe N. Graddock.
Grafton.....	Taylor.....	985	18	43.3	+ 0.3	72	6†	17	29	41	1.84	-1.12	1.00	T.	7	19	4	7	w.	Joseph Gerken.
Green Sulphur Springs.....	Summers.....	1,600	16	40.6	- 2.0	73	10	8	29	48*	1.51	-0.55	1.14	0.5	8	10*	8*	11*	w.	Arthur George.
Hinton.....	do.....	1,400	22	42.4	- 2.2	76	12	25	29	46	1.36	-0.39	0.76	1.0	6	12	4	14	w.	J. B. Lavender, C. E. Holcomb.
Holcombs.....	Nicholas.....	1	40.4			71	12*	12	29	41	2.78	-1.46	5.2	5	16	3	11		R. E. Ferguson.	
Huntington.....	Cabell.....	510	18	44.0	+ 0.6	73	6	23	16†	42	0.73	-2.03	0.42	0.5	3	18	2	10	w.	L. H. Hutchinson.
Lewisburg.....	Greenbrier.....	2,200	11	40.3	- 1.0	69	12	7	29	39	1.76	-0.79	1.35	1.5	5	17	5	8	nw.	Geo. T. Argabrite.
Logan.....	Logan.....	665	10	44.9		68	1†	21	29	39	2.31	-0.54	0.90	0.5	6	20	4	6	sw.	Dr. J. E. McDonald.
Lost Creek.....	Harrison.....	1,033	15	41.5	- 0.4	74	1	13	4	45	1.46	-0.95	0.75	0.5	5	15	7	8	w.	Allen Smith.
Madison.....	Boone.....	704	8																S. E. Bradley.	
Mannington.....	Marion.....	967	11	42.0	+ 1.7	72	11†	16	29	39	1.52	-0.62	0.91	0.6	10	11	6	13	w.	Jas. A. Morgan.
Marlinton.....	Pocahontas.....	2,169	17	36.2*	- 2.3	64	5†	2	29	42*	2.18	-0.66	1.78	T.	5	18*	6*	4*		C. J. McCarty.
Martontown.....	Monongalia.....	1,250	36	45.0	+ 1.7	69	6†	23	28	30	1.28	-1.74	0.74	0.5	7	17	8	5	s.	Horace Atwood.
Moundsville.....	Marshall.....	640	10	45.0	+ 2.4	73	6†	21	29	34	0.76	-0.73	0.55	T.	4	17	1	12		M. L. Brown.
New Cumberland.....	Hancock.....	987	14																	Frank S. Evans.
New Martinsville.....	Wetzel.....	634	18	45.0	+ 0.8	73	1†	22	4†	36	1.22	-1.42	0.90	T.	4	15	6	9	s.	Wm. Ankrum.
Nuttallburg.....	Fayette.....	2,252	18	40.0*		67	11	15	20	30*	0.58	-0.96	1.30	2.5	3	10*	8*	5*		Miss Donna Tully.
Parkersburg.....	Wood.....	638	25	44.9	+ 1.7	73	6	25	16	31	1.03	-1.30	0.49	T.	5	8	8	14	s.	U. S. Weather Bureau.
Parsons.....	Tucker.....	1,662	12	39.8	- 1.4	70	6	10</												

TABLE 1.—Climatological data for November, 1912. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.				
				Mean.	Departure from the normal.			Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.			Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.
					Highest.	Date.	Lowest.													
Ohio—Continued.																				
Bladensburg.	Knox.	1,100	21	41.8b	+ 3.2	71 ^b	6	8 ^b	28	46 ^b	1.73	- 0.41	1.57	T.	3	9	12	9	sw.	
Brilliant.	Jefferson.	700	40.7	40.7	72	22	20	28	26	0.50	0.50	0.30	0.30	T.	2	17	6	7	w.	
Cadiz.	Harrison.	1,245	9	42.4	.....	69	6 ^f	19	28	27	0.65	0.21	0.3	0.5	5	11	12	7	w.
Cambridge.	Guernsey.	803	20	41.6	+ 2.2	73	6 ^f	15	28	42	0.53	- 1.80	0.21	0.4	9	16	6	10	sw.	
Camp Dennison.	Hamilton.	570	19	42.6	- 0.3	71	11	15	28	34	1.00	- 1.78	0.32	0.5	6	14	6	10	sw.	
Canal Dover.	Tuscarawas.	884	19	40.2	+ 0.4	70	6	17	28 ^f	41	0.59	- 2.00	0.41	T.	4	11	9	10	sw.	
Canton.	Stark.	1,089	29	41.2	+ 1.3	70	6	19	28	28	1.08	- 1.55	0.54	0.7	10	16	0	14	sw.	
Cardington.	Morrow.	1,010	17	40.9	+ 1.5	69	12	12	29	35	0.54	0.7	0.7	0.7	16	0	14	0	sw.	
Chillicothe.	Ross.	630	9	.....	.....	.....	.....	.....	.....	.....	.....	1.11	0.98	0	2	.....	.....	.....	J. W. Shaw.
Cincinnati.	Hamilton.	628	41	45.8	+ 1.2	72	11	24	28	33	0.71	- 2.50	0.38	T.	4	12	7	11	sw.	
Clareville.	Pickaway.	694	24	44.0	+ 1.6	75	6	20	28	31	1.57	- 1.07	0.90	T.	5	15	6	9	s.	
Clarington.	Monroe.	600	9	44.0	.....	72	6	18	29	38	1.17	0.40	T.	5	11	9	10	sw.	
Columbus.	Franklin.	918	34	42.6	+ 1.2	70	6	22	28	30	1.01	- 2.10	0.80	T.	4	15	7	8	sw.	
Coshocton.	Coshocton.	770	3	.....	.....	.....	.....	.....	.....	.....	0.52	0.50	0	16	0	14	0	sw.	
Dayton (1).	Montgomery.	899	43.2	49.9	71	11	21	28	34	0.81	- 2.08	0.57	0.2	6	12	6	12	sw.		
Dayton (2).	do.	790	31	43.4	+ 1.3	73	11	19	28	33	0.05	- 1.95	0.68	0.8	4	12	4	11	sw.	
Delaware.	Delaware.	896	15	39.6	- 0.8	70	11	13	28	33	0.50	- 1.91	0.36	0	5	16	4	10	sw.	
Demos.	Belmont.	1,325	24	42.2	+ 0.9	82	6	20	28	38	0.89	- 1.54	0.62	0.2	4	17	6	7	sw.	
Dennison.	Tuscarawas.	846	2	42.0	.....	72	6	18	28	47	0.26	0.15	0	2	20	2	3	s.	
Frankfort.	Ross.	745	20	43.0	+ 0.6	74	6	19	28	30	1.50	- 0.96	1.25	0.6	3	12	5	13	s.	
Gallipolis.	Gallia.	580	.....	.....	.....	.....	.....	.....	.....	.....	0.96	0.35	0	6	16	0	14	sw.	
Garrettsville.	Portage.	1,005	28	41.0	+ 2.4	70	6	11	28	32	2.18	- 0.84	0.89	4.6	10	10	8	12	sw.	
Granville.	Licking.	960	30	41.2 ^b	+ 1.2	73 ^b	6	18 ^b	28 ^b	33 ^b	1.50	- 1.61	1.18	T.	4	12	4	11	sw.	
Gratiot.	do.	1,000	23	41.9	+ 0.9	71	6	18	28	30	0.92	- 1.82	0.74	T.	4	10	9	11	w.	
Green.	Adams.	500	19	45.0	+ 0.8	76	6	20	4	41	2.40	- 0.59	1.25	2.0	4	15	8	7	nw.	
Green Hill.	Columbiana.	1,135	19	38.8	+ 1.2	69	6	17	28	29	0.46	- 1.69	0.27	0.7	4	10	13	7	sw.	
Greenville.	Darke.	1,060	26	42.9	+ 2.4	70	11	21	28	26	0.96	- 2.27	0.45	T.	5	13	7	10	w.	
Hamilton.	Butler.	601	.....	.....	.....	.....	.....	.....	.....	.....	1.40	0.71	0.5	3	13	7	10	sw.	
Haydenville.	Hocking.	700	42.6	.....	75 ^b	6	9 ^b	27	50 ^b	0.24	.....	0.24	0	1	18 ^b	7 ^b	3 ^b	sw.	
Hillsboro.	Highland.	1,063	33	.....	.....	.....	.....	.....	.....	.....	1.17	0.61	0	5	10	3	17	sw.	
Ironton.	Lawrence.	575	29	44.8	+ 0.8	76	6	19	28	41	1.08	- 1.68	0.39	0.5	6	11	11	8	sw.	
Kenton.	Hardin.	1,015	20	40.7 ^a	+ 0.5	70	12	16 ^a	28 ^a	32 ^a	1.39	- 2.09	0.75	0.2	4	14	5	11	w.	
Killbuck.	Holmes.	1,087	19	42.6	+ 2.8	76	6	16	28	32	1.77	- 0.68	1.20	0.5	4	20	2	8	ne.	
Kings Mills.	Warren.	640	.....	.....	.....	.....	.....	.....	.....	.....	1.17	0.61	0	5	10	3	17	sw.	
Lancaster.	Fairfield.	898	17	43.4	+ 1.0	74	6	21	28	26	0.93	- 1.65	0.60	T.	3	13	6	11	sw.	
McConnellsburg.	Morgan.	710	28	41.8	- 0.2	73	6	15	28	32	0.72	- 2.12	0.53	0.5	3	9	7	14	sw.	
Marietta.	Washington.	627	92	45.8	+ 3.1	72	6	21	28	36	0.84	- 2.15	0.50	0	5	10	9	11	sw.	
Marion.	Marion.	980	34	42.0	+ 1.6	70	11	16	28	31	1.36	- 1.26	0.40	1.3	8	12	9	9	sw.	
Millfordton.	Knox.	1,200	20	39.3	+ 0.5	70	6	17	28	38	1.27	- 1.05	0.98	0.5	5	11	11	8	sw.	
Milligan.	Perry.	875	19	42.6	+ 1.6	80	11	20	28	46	0.52	- 1.72	0.32	0.5	4	12	10	8	sw.	
Millport.	Columbiana.	1,145	19	40.6	+ 1.3	70	6	17	28	30	0.45	- 1.91	0.33	0.3	5	8	13	9	sw.	
Nelle.	do.	850	12	40.0	+ 0.4	70	6	12	28	33	1.36	- 1.07	0.98	T.	2	12	12	6	s.	
New Berlin.	Stark.	1,100	19	40.4	+ 1.1	68	6	19	28	29	1.44	- 0.87	0.75	0.5	6	16	5	9	sw.	
New Waterford.	Columbiana.	1,053	17	41.2	+ 1.8	68	6	19	29	30	0.99	- 1.83	0.53	1.0	3	14	7	9	sw.	
O. S. University.	Franklin.	757	29	42.6	+ 2.2	71	6 ^f	19	28	28	1.05	- 1.65	0.44	T.	5	12	10	8	s.	
Oregonia.	Warren.	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.30	- 2.24	0.20	T.	3	18	0	12	s.
Pataskala.	Licking.	1,015	20	41.6	+ 1.1	72	6	17	28	31	1.63	- 1.32	1.32	0.1	6	11	13	6	sw.	
Peebles.	Adams.	645	1	42.8	.....	76	6	14	28	43	1.39	- 1.70	0.40	1.0	7	12	8	10	nw.
Philo.	Muskingum.	1,018	21	44.0	+ 1.0	72	6 ^f	18	28	30	0.38	- 1.82	0.26	T.	3	12	4	14	sw.	
Piqua.	Plattsmouth.	847	2	42.9	.....	72	6	21	28	36	0.84	- 1.45	0.45	0.5	6	11	5	14	sw.
Plattsburg.	Clark.	1,130	19	41.4	+ 0.3	69	11	14	28	27	1.17	- 1.74	0.63	1.0	6	14	7	9	sw.	
Portsmouth.	Scioto.	527	81	45.4	+ 0.7	74	6	23	29	42	1.27	- 1.69	0.71	T.	5	17	2	11	sw.	
Prospect.	Marion.	909	2	.....	.....	.....	.....	.....	.....	.....	1.17	0.63	2.4	2	13	6	11	sw.	
Sidney.	Shelby.	955	29	43.3	+ 2.8	73	11	18	28	30	0.90	- 2.35	0.42	0.2	8	13	4	13	sw.	
Somerset.	Perry.	1,080	30	43.6	+ 0.4	71	6	18	28	28	0.59	- 1.70	0.40	T.	3	11	9	10	sw.	
Springfield.	Clark.	980	18	.....	.....	.....	.....	.....	.....	.....	0.92	- 1.76	0.62	T.	5	14	8	8	sw.
Summerfield.	Noble.	1,187	6	42.3	.....	72	6	13	28	32	0.81	.....	0.47	0.2	4	10	12	8	sw.
Syracuse.	Meigs.	533	1	43.8	.....	76	6	20	16 ^a	37	1.14	.....	0.51	1.0	4	21	4	20	w.
Thurman.	Galla.	696	19	46.4	+ 2.4	78	6	18	28	39	0.68	- 1.86	0.43	1.0	3	12	9	9	sw.	
Urbana.	Champaign.	1,031	44	40.6	+ 0.3	71	12	14	28	32	0.94	- 1.97	0.55	T.	4	14	9	7	sw.	
Warren.	Trumbull.	900	23	42.3	+ 2.5	71	6	21	28	30	1.36	- 1.17	0.63	2.4	8	13	3	10	sw.	
Waverly.	Pike.	590	29	43.8	+ 1.0	75	6	19	28	39	1.13	- 1.71	0.69	0.4	6	12	2	16	s.	
Waynesville.	Warren.	700	27	42.9 ^a	+ 1.3	70	11	17	28	27	1.17	- 1.98	0.60	0.1	5	17	4	9	sw.	
Wooster.	Wayne.	1,030	33	41.0	+ 1.2	68	6 ^f	18	28	28	1.79	- 0.95	1.32	0.4	8	8	6	16	sw.	

TABLE 1.—Climatological data for November, 1912. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.								Precipitation, in inches.								Sky.	Prevailing wind direction.	Observers.			
				Mean.	Departure from the normal.		Highest.	Lowest.	Date.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.						
					High.	Low.																			
<i>Indiana—Continued.</i>																									
Marengo.	Crawford.	363	30	42.8	-2.1	73	11	15	28	40	1.64	-3.06	0.84	0.1	4	12	12	6	sw.	J. M. Johnson.					
Marion.	Grant.	814	26	42.0	+1.8	72	11	18	23	30	1.80	-1.33	0.81	1.2	7	14	9	7	sw.	James F. Hood.					
Mauzy.	Rush.	980	32	41.2	+1.4	72	11	15	28	32	0.92	-2.59	0.39	1.4	4	14	4	10	sw.	Elwood Kirkwood.					
Monticello.	White.	674	2								3.42		1.10	T.	4	19	3	8	w.	J. E. Loughry.					
Moore's Hill.	Dearborn.	950	11	43.8	+0.4	71	11	18	28	38	0.81	-1.45	0.35	0.5	4	20	2	8	sw.	W. S. Bigney.					
Mount Vernon.	Posey.	410	26	44.8	-0.8	75	11	22	28	37	1.08	-2.85	0.70	0.7	4	20	1	9	sw.	Guy B. Green.					
Nashville.	Brown.	432									0.63		0.50	0.3	4	11	9	10	w.	W. C. Goble.					
Paoli.	Orange.	611	15	43.4	-1.1	71	11	15	28	34	0.63		0.50	0.3	4	17	5	8	sw.	James A. Gillum.					
Princeton.	Gibson.	481	30	44.4	+0.5	74	10	20	28	31	1.69	-1.82	0.74	T.	4	18	2	10	sw.	Albert Mills.					
Richmond.	Wayne.	972	27	40.8	0.0	71	11	15	28	35	0.61	-2.48	0.22	0.9	6	12	12	6	sw.	Walter Vossler.					
Rochester.	Fulton.	775	7	41.0		68	11	20	28	25	2.98		1.00	0.2	7	16	4	10	sw.	G. P. Keith.					
Rockville.	Parke.	722	26	43.0	+1.0	72	11	18	28	33	2.38	-0.86	1.81	1.0	4	12	9	9	w.	C. A. Lee.					
Rome.	Perry.	370	9	46.2		76	11	18	28	38	1.10		0.73	T.	4	17	5	8	sw.	Adam Anspach.					
Salamonia.	Jay.	950	7	41.4		71	11	16	28	30	1.52		0.50	3.0	8	12	7	11	sw.	S. A. Armstrong.					
Salem.	Washington.	717	19	43.1	-1.5	73	9	15	28	40	1.11	-2.23	0.60	T.	3	11	7	12	w.	Emmet S. Allen.					
Scottsburg.	Scott.	570	18	41.0	-0.9	72	11†	16	28	36	0.64	-2.41	0.26	T.	3	8a	6g	9a	w.	Frank H. Park.					
Seymour.	Jackson.	610	25	44.4	+0.9	74	11	17	28	35	0.56	-2.92	0.25	T.	4	17	5	8	sw.	J. Robt. Blair.					
Shelbyville.	Shelby.	768	8	42.6		73	11	17	28	37	1.19		0.48	2.5	5	8	18	6	sw.	Edgar G. Hodson.					
Shoals.	Martin.	523	5								1.33		0.68	T.	4	17	5	8	sw.	Rev. G. Halleck Rowe.					
Terre Haute.	Vigo.	498	22	44.1	-0.3	71	11	25	28	26	1.18	-2.05	0.67	0.1	6	7	15	8	sw.	U. S. Weather Bureau.					
Veedersburg.	Fountain.	612	13	42.8	+0.6	74	11	15	28	36	2.80	+0.45	1.05	1.0	8	18	4	8	s.	L. A. Culver, Jr.					
Vevay.	Switzerland.	525	31	45.8	+0.7	75	12	19	28	33	1.35	-2.01	1.00	0.5	3	13	6	11	nw.	Miss Frederica Boerner.					
Vincennes.	Knox.	431	20	44.4	+2.6	73	11†	20	28	31	2.50	-1.02	1.00	T.	4	18	1	11	s.	Garnett V. List.					
Washington.	Davies.	484	16	44.2	-1.6	72	11†	20	28	30	1.79	-1.35	0.75	T.	4	16	4	10	sw.	Charles C. Feagans.					
Whitestown.	Boone.	529	4	40.6		70	11	19	28†	35	1.64		0.94	T.	6	13	12	5	sw.	Clyde O. Laughner.					
Winona Lake.	Kosciusko.	865	5	41.4		71	11	20	28	32	3.35		1.16	2.0	8	20	5	5	w.	Rev. Albert A. Young.					
Worthington.	Greeke.	526	30	43.0	0.0	70	11†	18	28	32	2.10	-1.60	0.72	2.0	6	14	11	5	sw.	D. W. Soiliday.					
<i>Illinois.</i>																									
Albion.	Edwards.	531	21	44.6	+0.9	73	20	20	28	33	1.97	-1.42	1.07	0.2	4	20	5	5	sw.	B. F. Michels.					
Casey.	Clark.	645	9								1.31	-2.10	0.80	0	2	20	2	8	w.	Wm. Chenoweth.					
Charleston.	Coles.	720	27	43.2	+1.1	72	11	18	28	29	1.22	-1.98	0.42	T.	4	11	13	6	s.	Jacob B. Daisy.					
Danville.	Vermillion.	604	11	43.2	+3.2	74	11	18	28	35	2.39	-0.73	0.85	0.6	8	17	4	9	sw.	J. J. Lemon.					
Equality.	Gallatin.	421	14	48.6	+1.0	76	5†	23	28	32	1.57	-1.39	1.05	0	4	21	1	8	n.	Dr. L. W. Gordon.					
Fairfield.	Wayne.	450	19	45.2	+0.1	75	10	19*	28	34a	2.87	-0.28	1.20	T.	6	13	12	5	nw.	George A. Tromly.					
Flora.	Clay.	495	26	45.2	+2.6	75	10	21	28†	33	2.10	-1.21	1.01	0	0	3	19	7	4	sw.	W. L. Hanna.				
Golconda.	Pope.	500	34	46.0	-0.6	78	11	17	28	40	1.42	-2.71	0.78	0	4	21	5	4	uw.	Dr. D. Lawrence.					
Hoopston.	Vermilion.	715	10	43.0	+2.1	73	11	18	28	29	2.97	+0.33	0.92	0.7	7	17	3	5	sw.	S. F. Hoskinson.					
McLeansboro.	Hamilton.	462	29	44.9	+0.2	74	10	20	28	33	2.65	-0.78	1.32	0	4	20	5	5	w.	Prof. W. C. Fairweather.					
Metropolis.	Massac.	346	1								1.45		1.00	0	0	3	22	2	6	sw.	Henry F. Humma.				
Montrose.	Edingham.	599	2	42.6		74	11	16a	28	36a	1.50		0.58	T.	6	15	7	8	sw.	J. C. Spitzer.					
Mount Carmel.	Wabash.	424	11	44.0	+0.4	74	10†	21	28†	39	1.80	-1.86	0.66	T.	4	20	1	9	s.	Mrs. H. M. Phillips.					
Newton.	Johnson.	613	17	45.9	+1.1	74	10†	19	28	33	1.55	-1.66	0.73	0	5	23	4	3	nw.	Thomas H. McCabe.					
Jasper.		484	1								1.25		0.60	0	0	5	21	4	5	sw.	J. M. Hicks.				
Richland.	Crawford.	486	25	43.0	-0.6	71	10†	21	28	39	1.31	-2.14	0.90	T.	3	21	4	5	nw.	John T. Ratcliff.					
Palestine.	500	30	44.8	+2.0	72	10	20	28	30	2.59	-0.98	0.96	T.	5	16	6	10	sw.	Duane Shaw.						
Paris.	Edgar.	600	19	42.7	+0.7	72	11	20	28	33	2.15	-1.10	0.73	T.	4	17	6	7	nw.	H. P. Twyman.					
Philo.	Champaign.	700	28	40.7	+1.2	72	10†	13	28	35	1.74	-1.30	1.03	T.	4	19	7	4	sw.	H. A. Burr.					
Rantoul.	do.	768	21	42.7	+2.9	72	11	18	28	35	2.73	+0.07	0.77	0.2	6	20	1	9	nw.	William Breiner.					
Rileyville.	Saline.	400	15								2.38	-0.16	0.98	0	4	19	0	11	sw.	William Thorberry.					
Shawneetown.	Gallatin.	307	2								1.23		0.82	0	3	22	1	7	nw.	Mrs. Mary O. Spivey.					
Tuscola.	Douglas.	644	19								1.36	-0.53	0.94	T.	4	18	2	10	sw.	Joseph O'Neal.					
Urbana.	Champaign.	725	10	41.8	+1.0	72	11	16†	28	31*	1.77	-0.39	1.25	T.	5	9	15	6	sw.	Prof. J. G. Mosler.					
<i>Kentucky.</i>																									
Alpha.	Clinton.	18	48.6	-0.4	75	11	18	28	36	1.05	-3.01	0.55	0.5	3	19	4	7	w.	W. W. Hicks.						
Anchorage.	Jefferson.	700	11	43.8	-0.3	74	11	14	28	40	1.39	-1.54	1.02	0.2	3	16	5	9	sw.	C. E. Barrett.					
Bardstown.	Nelson.	637	15	45.5	-1.1	76	11	15	28	37	1.43	-1.95	0.75	1.0	5	18	1	11	se.	T. S. Talbott.					
Beattyville.	Lee.	650	8	43.1		81	11†	13	29	50	1.36	-1.61	0.60	2.0	5	11	7	12	e.	G. W. Cann.					
Beaver Dam.	Ohio.	441	9	44.9	-0.2	77	11	15	28	42	1.05	-2.07	0.57	0	3	19	1	10	s.	W. T. Austin.					
Berea.	Madison.	1,070	11	48.0	+1.3	77	10	20	28	38	1.55	-1.25	0.91	0.2	5	20	3	7	sw.	C. F. Rumold.					
Blandville.	Ballard.	445	31	48.6	+2.0	74	10	24	28†	31	0.73	-3.23	0.37	0	3	20	4	6	sw.	E. W. Horn.					
Bowling Green.	Warren.	500	23	45.5	-1.4	77	11	15	28	40	0.32	-3.74	0.52	0.2	3										

TABLE 1.—Climatological data for November, 1912. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.								Precipitation, in inches.								Sky.	Prevailing wind direction.	Observers.			
				Mean.				Departure from the normal.				Greatest daily range.				Total.				Departure from the normal.					
				Highest.	Date.	Lowest.	Date.	Greatest.	Date.	Lowest.	Date.	Greatest.	Date.	Lowest.	Total.	Greatest in 24 hours.	Total.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.				
<i>Tennessee.</i>																									
Ashwood.	Maury.	725	33	47.2	-1.8	76	10†	17	28	40	0.25	-3.52	0.25	T.	1	16	6	8	n.	Mrs. Joseph W. Fleming.					
Benton.	Polk.	880	27	44.6	-4.6	76	12	16	28	43	1.88	-1.14	1.10	2.0	4	18	7	5	e.	George L. Williams.					
Birds Bridge.	Greene.	6										1.93		1.20	3.8	5	23	3	4	n.	David B. George.				
Bluff City.	Sullivan.	15										2.16		0.19	1.28	2.0	6	15	7	8	e.	John W. Fisher.			
Byrdstown.	Pickett.	1,026	19	46.8	-1.2	73	11†	19	28	34	0.90	-2.95	0.52	T.	2	23	12	7	s.	John Lacy.					
Carthage.	Smith.	500	28	46.4	-2.0	77	10	17	28	44	1.92	-1.87	1.31	T.	2	18	2	10	nw.	Earl C. Pickering.					
Cedar Hill.	Robertson.	625	12	47.2	-	77	11	18	28	35	0.95	-3.64	0.60	0.5	3	23	6	1	w.	J. Frank Ruffin.					
Celina.	Clay.	494	9									1.25		0.64	T.	1	12	2	12	n.	Charles M. Anderson.				
Charleston.	Bradley.	709	15									1.61		1.50	1.36	1.5	3	17	6	7	n.	John T. Weeks.			
Chattanooga.	Hamilton.	808	33	48.2	-2.1	76	11	24	29	38	0.64	-2.94	0.34	0.8	4	16	9	5	nw.	U. S. Weather Bureau.					
Clarksville.	Montgomery.	500	49	46.8	-0.2	76	11	19	28	40	0.92	-3.30	0.69	0.2	3	18	7	5	n.	Prof. James A. Lyon.					
Clinton.	Anderson.	800	24									2.01		1.22	1.01	T.	4	17	6	7	n.	Hugh Evans.			
Crossville.	Cumberland.	1,895	8	44.4	-	73	11	15	28	37	1.54		0.70	0.9	6	22	3	5	w.	J. E. Converse.					
Dandridge.	Jefferson.											1.44		1.00	1.0	4	19	1	10	w.	James E. Swann.				
Decatur.	Meigs.	850	16	44.8	-3.8	75	11†	16	29	47	1.14	-2.16	0.50	3.0	5	23	3	4	nw.	J. Worth Lillard.					
Dickson.	Dickson.	800	16	47.6	-0.6	78	11†	15	28	44	0.78	-3.24	0.50	T.	2	19	6	5	s.	Nathan R. Stagg.					
Dover.	Stewart.	500	17	47.2	-1.2	79	11	15	28	41	1.21	-3.34	1.05	T.	2	18	6	6	s.	Asa M. Tippit.					
Dunlap.	Squatchie.	726	3	45.8	-	75	11	18	29	46	0.90		0.43	T.	5	19	6	5	e.	S. Bradford Boyd.					
Elizabethhton.	Carter.	1,575	22									0.81	-1.37	0.25	3.5	5	18	0	12	n.	Charles Boyd.				
Erasmus.	Cumberland.	1,850	15	41.2	-3.5	76	11	14	28	48	1.31	-2.29	0.51	0.3	6	17	9	4	nw.	Mrs. Sarah E. Ashley.					
Florence.	Rutherford.	560	30	46.4	-2.2	76	1	17	28	35	2.97	-0.56	1.10	0.2	4	22	2	6	s.	Erastus P. Bell.					
Franklin.	Williamson.	648	22	45.0	-2.9	73	11	17	28	38	1.12	-2.38	0.57	T.	2	20	3	7	n.	Young M. Rizer.					
Halls Hill.	Rutherford.											2.45		1.25	T.	2	14	4	12	n.	Edward F. Wright.				
Hohenwald.	Lewis.	983	26	46.6	-1.7	75	1†	14	28	49	1.39	-2.65	0.84	0	3	17	11	2	nw.	Mrs. Mary Lutzelman.					
Iron City.	Lawrence.	600	15	45.0	-4.7	74	10	14	28	46	1.38	-2.07	0.88	T.	3	13	16	1	sw.	Capt. H. Paul Seavy.					
Jefferson City.	Jefferson.	2										1.26		0.84	2.0	3					Calvin C. Maddox.				
Johnson City.	Washington.	1,620	1	42.6	-3.3	73	11†	11	29	46	2.35	-0.68	1.17	3.5	5	19	7	4	w.	Ward Crosby.					
Johnsonville.	Humphreys.	364	16	47.8	-1.4	78	9	16	28	44	1.14	-3.22	0.66	T.	5	15	8	7	s.	Miss Sallie B. Mathews.					
Kingston.	Roane.	21										1.51	-1.62	0.58	T.	4	23	0	7	n.	Henry Crumbliss.				
Knoxville.	Knox.	977	41	46.0	-1.1	74	11	21	29	36	1.47	-2.13	0.88	0.5	5	17	6	7	sw.	U. S. Weather Bureau.					
Lebanon.	Wilson.	522	3	48.1	-	75	11	12	28	36	1.93		1.40	T.	2	18	2	10	n.	H. Logan Fields.					
Lewisburg.	Marshall.	727	17	46.7	-2.9	77	11	15	28	48	2.07	-0.97	1.25	0.4	5	20	6	4	se.	Dr. Robert D. Crutcher.					
Loudon.	Loudon.	816	9									1.67	-1.36	0.76	0.5	4	19	3	8	w.	Robert W. Clark.				
Lynville.	Giles.	770	24	45.2	-3.7	70	12	20	28	37	1.94	-1.39	1.18	T.	3	22	5	3	s.	Col. James H. Burrow.					
McGhee.	Monroe.	8										1.92		1.18	2.0	3	23	1	6	s.	Miss Alice L. Headrick.				
McMinnville.	Warren.	1,011	28	45.6	-2.8	77	11	16	28	47	1.75	-1.89	0.75	T.	3	20	8	2	nw.	Horace H. Stiles.					
Maryville.	Blount.	1,050	16									1.51		1.62	0.58	T.	4	23	0	7	n.	Mrs. Sam Broyles.			
Mountain City.	Johnson.	2,486	15	40.6	-1.8	72	12	1	29	50	1.59	-0.78	0.70	4.0	5	18	1	11	w.	Edward E. Barry.					
Nashville.	Davidson.	654	41	47.2	-1.5	75	10	22	28	38	0.65	-3.20	0.42	T.	3	16	7	7	s.	U. S. Weather Bureau.					
Newport.	Cooke.	1,280	22	43.1†	-3.0			15	29	37	2.10	-0.63	0.95	4.5	5	17	4	9	s.	Dr. Charles T. Burnett.					
New River.	Scott.	1,215	5									0.73		0.38	0.2	3	18	3	9	n.	Burl W. Buttram.				
Palmetto.	Bedford.	770	19	46.9	-3.5	75	11	16	28	41	1.49	-1.43	0.64	T.	3	15	9	6	s.	Mrs. Ross Woods.					
Perryville.	Decatur.	387	15	48.0	-	80	1	18	24	40	2.07	-2.23	1.66	T.	3	25	3	2	n.	Oliver C. Kirkpatrick.					
Pinewood.	Hickman.	5										0.28		0.25	T.	1	20	6	5	s.	Miss Carrie Cash.				
Rogersville.	Hawkins.	1,150	27	43.9	-2.3	73	11†	16	29	42	1.58	-1.29	1.01	2.0	6	16	9	5	w.	Fred Beal.					
Rugby.	Morgan.	1,410	24	43.8	-0.9	76	10†	11	28	47	1.42	-2.14	0.45	1.0	5	16	7	7	n.	Samuel G. Wilson.					
Savannah.	Hardin.	442	28	48.0	-1.8	77	11	17	28	44	1.26	-2.47	0.70	T.	4	16	7	7	s.	W. H. Carrington.					
Sevierville.	Sevier.	6	44.2	-	74	11	13	29	44	1.69		1.00		1.00	3.0	5	11	11	8	sw.	Herbert O. Eckel.				
Sewanee.	Franklin.	2,000	16	46.6	-1.6	64	5	23	28	36	0.83	-2.82	0.63	2.0	2	19	5	6	n.	University of the South.					
Sparta.	White.	920	6	44.5	-	75	11	16	28	44	1.85		1.10	0.5	4	18	5	7	w.	Ernest H. Hull.					
Springville.	Henry.	377	9	46.4	-1.3	75	10†	14	28	44	1.57	-3.21	1.04	T.	4	26	1	3	n.	Hudnall A. Boden.					
Tazewell.	Claiborne.	1,350	24	41.2	-2.9	74	11	10	28	49	1.27	-1.90	0.75	T.	3	19	3	8	n.	J. Caloway Carr.					
Tullahoma.	Coffee.	1,075	24	45.2	-1.9	71	1†	16	28	41	2.31	-1.10	1.07	T.	5	19	8	3	n.	Reuben T. Moore.					
Walling.	White.	909	9									1.26		0.52	T.	3	21	2	7	nw.	John K. Roberts.				
Waynesboro.	Wayne.	753	26	47.0	-1.6	76	11	15	28	44	1.75	-1.74	1.05	T.	4	16	8	6	n.	Harry C. Boyd.					
Wildersville.	Henderson.	400	15	46.4	-3.6	74	11	20	25	36	1.28	-2.62	0.64	T.	3	19	3d	4d	n.	William R. Wilson.					
Worsham.	Sumner.	550	11									0.79	-3.22	0.65	0.5	3	20	2	8	nw.	James G. Elizer.				
Yukon.	Lincoln.	850	15	46.2	-5.0	71	12	20	28	36	1.28	-2.30	0.83	0	3	19	8	3	n.	William P. Watson.					
<i>Georgia.</i>																									
<i>North Carolina.</i>																									
Arden.	Cherokee.	1,800	2	44.0	-	75	11	13	29	47	1.73	-0.91	1.0	5	19	7	4	n.	J. D. Link.						
Asheville.	Buncombe.	2,255	33	43.1	-2.0	75	12	12	29	39	2.00	-1.30	1.41	2.2	5	18	5	7	nw.	U. S. Weather Bureau.					
Banners Elk.	Avery.	3,750	4	36.6	-	67	12	4	29	39	3.05	-1.00	0.80	5	20	0	10	w.	T. L. Lowe.						
Blantyre.	Transylvania.	1,900	1	43.0	-	79	12	6	2																

TABLE 1.—*Climatological data for November, 1912. District No. 3—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.								Precipitation, in inches.								Sky.	Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.				
<i>Virginia.</i>																						
Blacksburg.....	Montgomery.....	2,170	21	42.6	+ 0.4	73	12	8	29	46	1.97	- 0.18	1.17	1.3	5	18	9	3	w.	Agricultural Experiment Station.		
Burkes Garden.....	Tazewell.....	3,250	17	38.1	- 2.2	64	12	6	29	46	1.90	- 1.10	1.04	4.0	4	16	2	12	w.	C. H. Greever.		
Elk Knob.....	Lee.....	3,243	9	44.2	.....	68	12	22	28	23	1.86	.....	0.85	1.0	8	17	6	7	nw.	Henry Nicoll.	
Ivanhoe*.....	Wythe.....	16	40.3	.....	66	12†	8	29	34	1.76	.....	0.85	0.3	6	21	6	3	w.	Miss Alice G. Jewett.		
Max Meadows.....	do.....	2,028	16	40.3	- 3.2	72	11	2	29	46	1.83	- 0.13	0.85	3.5	5	15	7	8	w.	James M. Graham.		
Mendota.....	Washington.....	1,350	3	.....	.....	.....	.....	.....	.....	1.66	.....	0.80	2.0	7	.....	.....	.....	.....	.....	Frank M. Barker.	
Mountain Lake.....	Giles.....	4,343	2	34.1	.....	70	11	0	29	39	3.20	.....	1.90	3.0	5	17	6	7	nw.	H. E. Dorland.	
Radford.....	Montgomery.....	1,773	3	.....	.....	.....	.....	.....	.....	1.86	.....	1.32	1.0	3	.....	.....	.....	.....	.....	Arthur Roberts.	
Speers Ferry.....	Scott.....	1,221	16	.....	.....	.....	.....	.....	.....	1.60	- 1.66	0.84	2.0	6	21	3	6	w.	Mrs. L. E. Venable.		
Wytheville.....	Wythe.....	2,293	19	41.1	- 1.9	68	13	12	29	41	1.74	- 1.30	1.20	T.	7	20	6	4	w.	U. S. Weather Bureau.		

*, †, ‡, etc., indicate respectively 1, 2, 3, etc., days missing from the record.

** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for November, 1912. District No. 3, Ohio Valley.*

Stations.	Watershed.	Day of month.																														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total.
New York.																																
Allegany.	Allegany.	.33	.22				T.	.48	T.	.39																						2.20
Bolivar.	do.	T.	.16	.16				.75		.41																					2.42	
Olean||	do.	.08	.35	.15	T.			.40	.35	.25	.06																			2.42		
Pennsylvania.																																
Aleppo.	Ohio.	.23																														1.60
Baldwin.	Allegheny.	T.	T.																													1.32
Beaver Dam||	Ohio.	.05	.03	T.																											0.62	
Beaver Falls||	do.	.05	.04	T.																											0.61	
Brookville.	Allegheny.	.25	.10	.10	.10																										2.00	
California.	Monongahela.	.16	T.																												2.15	
Clarion||	Allegheny.																														1.01	
Claysville.	Ohio.	.17	.02																												1.03	
Confluence||	Youghiogheny.	.19	T.																												1.86	
Coraopolis||	Ohio.	.02	.06	T.																										0.70		
Davis Island Dam||	do.	.01	.07	T.																										0.63		
Derry Station.	Allegheny.	.05	T.																												0.92	
Ellwood City||	Ohio.	.07	.02	T.																										0.81		
Franklin||	Allegheny.	.10	.12	.10																										1.56		
Freeport||	do.	.02	T.	T.																										1.20		
Greensboro||	Monongahela.	T.	.06																											1.16		
Greensburg.	Youghiogheny.	.11	T.	T.																										1.21		
Grove City.	Ohio.	.26	.14	T.																										1.55		
Herrs Island Dam||	Allegheny.	.07	.06	.02																										1.01		
Indiana.	do.	.01	.07	T.																										0.75		
Irwin.	Monongahela.	.13	T.	T.																										1.33		
Johnstown.	Allegheny.	.23	.03	T.																										1.33		
Lock No. 4||	Monongahela.	.10	.10	T.																										1.33		
Lyciippus.	Allegheny.	.12	T.																											0.98		
Mosgrove||	Ohio.	.05	.02																											1.10		
Parkers Landing||	Allegheny.	.08		.10																										1.34		
Pittsburgh.	Ohio.	.06	T.																											0.80		
Saegerstown.	Allegheny.	.18	.20	.07																										1.56		
Saltsburgh||	do.	.12	.01																											1.33		
Sharon.	Ohio.	.10	.04	T.																										1.03		
Skidmore.	do.																													0.85		
Somerset.	Youghiogheny.	.26	T.																												3.17	
Springdale||	Allegheny.	.02	.24																												1.16	
Uniontown.	Monongahela.	.18	T.																												1.17	
Warren.	Allegheny.	.40	.10	.20																										2.50		
West Newton||	Youghiogheny.	.24																													1.29	
Maryland.																																
Deer Park.	Youghiogheny.	.09	T.																												2.09	
Grantsville.	do.	.07																													2.01	
Oakland.	do.	.15	T.																												2.39	
West Virginia.																																
Bancroft||	G. Kanawha.	.24																													1.28	
Beckley.	do.	.50	T.																												4.03	
Bens Run.	Ohio.	.23																													1.39	
Bluefield.	G. Kanawha.	.29																													1.49	
Brandonsville||	Monongahela.																															
Buckhamon.	do.	T.																														
Cairo.	L. Kanawha.	.15																													1.12	
Central Station.	do.																															
Charleston||	L. Kanawha.	.15	T.																												1.27	
Cheat Bridge||	G. Kanawha.	.20																													1.36	
Cortland||	Monongahela.	.25																													3.35	
Creston||	L. Kanawha.	.20																													3.12	
Cuba.	Sand Creek.	.14	T.																												1.22	
Davis||	Monongahela.	.25																													0.83	
Doane.	Big Sandy.	.25																													0.88	
Elizabeth||	L. Kanawha.	.11	T.																												0.88	
Elkhorn.	Big Sandy.	.50	T.																												3.84	
Elkins.	Monongahela.	.29	T.	T.																											2.46	
Fairmont||	do.	.07	.17																												1.20	
Glenville||	L. Kanawha.	.23	T.																												2.38	
Grafton.	Monongahela.	.25																													1.84	
Green Sulphur Spgs.	G. Kanawha.	.09	T.																												1.51	
Hinton||	do.	.10																													1.36	
Holcomb.	do.	.45	T.																												1.02	
Huntington||	Ohio.	.12	T.																												0.78	
Lewisburg.	G. Kanawha.	.15																													0.78	
Logan.	Guyandotte.	.60																													1.76	
Lost Creek.	Monongahela.	.28																													2.31	
Madison.	G. Kanawha.	.23																													1.46	
Mannington.	Monongahela.	.01																													1.52	
Marlinton.	G. Kanawha.	.18																													2.18	
Martown.	Monongahela.	.32				</td																										

TABLE 2.—*Daily precipitation for November, 1912. District No. 3—Continued.*

TABLE 2.—*Daily precipitation for November, 1912. District No. 3—Continued.*

TABLE 2.—*Daily precipitation for November, 1912. District No. 8—Continued.*

TABLE 2.—*Daily precipitation for November, 1912. District No. 3—Continued.*

Stations.	Watershed.	Day of month.																													Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
<i>Virginia.</i>																																	
Blacksburg.....	Kanawha.....	.15						.13	1.17																							1.97	
Burkes Garden.....	Tennessee.....	.21	T.					T.	1.04																							1.90	
Elk Knob.....	do.....	.55	.02					T.	.85	.01																						1.86	
Ivanhoe |||.....	Kanawha.....	.01	.03					T.	.85	.10																						1.76	
Max Meadows.....	do.....	.20	T.					.15	.85																							1.83	
Mendota |||.....	Tennessee.....	.15	.10					.08	.20	.80																						1.66	
Mountain Lake.....	Kanawha.....	.20						.40	1.90																							3.20	
Radford |||.....	do.....								1.32																								1.86
Speers Ferry |||.....	Tennessee.....	.40	.04						.72	.12																						1.60	
Wytheville.....	Kanawha.....	.17	T.					.15	1.07																							1.74	

* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for November, 1912. District No. 3, Ohio Valley.*

Date.	Pennsylvania.				West Virginia.										Ohio.						Canton.		Cincin-nati.		Colum-bus.		Dayton.	
	Greenville.		Pittsburgh.		Charleston.		Elkhorn.		Elkins.		Glenville.		Huntington.		Morgan-town.		Parkersburg.		Wheeling.		Canton.		Cincin-nati.		Colum-bus.		Dayton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	59	39	62	37	69	45	65	45	63	37	45	30	60	48	65	35	65	40	64	41	60	34	67	34	62	32	65	31
2....	42	30	37	32	62	33	49	31	37	30	62	40	58	32	45	29	40	30	40	29	39	30	40	31	37	27	38	29
3....	44	30	43	32	50	31	61	24	43	23	65	32	46	25	45	25	46	29	49	26	45	25	50	26	45	26	44	26
4....	51	24	53	35	63	26	63	20	59	17	64	34	57	24	55	29	57	26	56	24	51	28	55	33	53	32	52	35
5....	63	40	63	49	69	39	64	32	64	35	70	34	67	25	61	49	63	51	67	25	63	41	62	49	58	43	56	44
6....	69	42	70	54	70	48	65	47	66	39	62	32	73	51	69	50	73	50	72	45	70	49	68	57	70	54	66	54
7....	61	45	62	46	68	50	64	49	59	44	64	31	58	56	64	50	62	44	58	43	57	43	57	44	56	37	55	39
8....	48	37	52	40	63	45	59	37	55	39	62	32	61	38	53	48	59	36	56	39	52	35	59	34	56	31	58	34
9....	45	35	44	37	60	42	58	38	45	32	59	40	52	40	52	33	48	37	45	32	40	39	40	48	40	49	36	
10....	49	35	57	38	62	34	68	33	63	29	70	29	68	34	61	35	66	36	62	36	57	35	69	42	64	40	66	45
11....	65	35	67	53	73	37	70	29	68	43	77	37	72	40	68	54	72	56	72	42	68	40	72	53	70	48	71	52
12....	67	40	68	56	73	42	70	37	69	41	78	37	72	47	69	54	72	50	72	41	67	48	71	55	65	50	67	53
13....	66	50	65	41	71	50	68	40	67	44	66	46	65	47	65	57	64	43	68	41	63	40	64	42	59	40	62	39
14....	50	33	42	34	62	42	60	32	44	32	58	38	45	40	57	39	46	37	44	39	40	32	44	36	40	33	39	33
15....	38	23	36	32	45	32	47	28	32	29	42	31	41	35	39	30	38	31	37	33	32	29	46	34	38	26	43	30
16....	46	32	45	31	50	26	45	21	44	27	52	22	48	23	44	30	47	25	50	27	47	23	53	28	49	26	50	29
17....	41	35	41	36	48	28	46	26	39	28	47	24	48	25	41	32	47	35	46	27	41	35	50	33	47	33	48	30
18....	47	28	45	33	54	28	47	24	45	28	51	32	53	31	46	31	50	33	52	28	46	25	56	35	52	30	53	31
19....	55	28	57	38	66	30	55	25	59	28	62	34	52	30	57	37	61	39	61	30	57	34	63	39	58	34	62	36
20....	60	28	60	44	68	38	63	28	62	33	58	32	64	39	60	45	64	45	64	38	61	36	68	43	62	41	63	40
Mns..	50.5	31.8	50.8	37.4	59.8	35.1	55.9	29.7	51.2	30.1	58.5	30.6	54.0	33.9	52.9	37.1	53.9	35.9	54.1	32.7	49.9	32.5	54.8	36.9	51.0	34.2	51.4	35.0

Date.	Ohio.				Indiana.								Phillo, Ill.								Kentucky.							
	Marion.		Waverly.		Butler-ville.		Evans-ville.		Indianapolis.		Kokomo.		Rock-ville.		Worthing-ton.		Beatty-ville.		Bowling Green.		Earling-ton.		Greensburg.		Lexington.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	60	37	67	42	64	39	46	38	43	32	48	35	49	36	62	33	42	34	51	46	41	40	46	42	53	43	67	37
2....	50	23	44	25	43	25	43	35	39	27	38	24	39	24	47	22	39	25	40	30	45	33	46	37	52	33	67	29
3....	47	21	50	20	50	21	51	33	47	26	47	20	51	21	49	22	50	22	56	18	56	20	57	23	57	18	46	25
4....	52	30	56	21	56	34	58	39	55	34	55	30	57	38	56	37	60	38	67	19	55	23	59	35	64	23	55	33
5....	59	39	65	42	59	46	65	52	58	45	60	44	55	42	60	44	59	40	76	27	65	33	69	42	78	48	66	49
6....	68	47	75	45	65	55	62	50	59	49	58	50	60	51	60	53	58	45	78	35	70	48	65	55	74	57	69	55
7....	58	43	60	47	59	45	53	44	55	41	56	42	57	44	58	46	53	36	57	46	67	41	53	42	59	35	61	41
8....	59	30	61	31	61	30	64	42	57	37	56	32	59	34	60	33	54	33	66	31	65	38	62	34	70	29	59	35
9....	49	37	54	38	57	34	61	41	52	36	52	32	55	32	56	31	55	28	63	35	65	32	68	30	67	32	54	37
10....	64	39	70	31	68	40	72	48	68	46	67	41	71	43	70	38	72	43	75	27	74	34	78	34	80	34	82	40
11....	70	45	74	48	75	53	73	52	70	56	72	50	73	51	70	50	72	51	81	31	77	43	78	54	82	41	72	48
12....	65	44	71	45	70	51	67	54	63	56	66	54	62	52	62	51	64	53	81	32	72	43	70	55	77	39	70	50
13....	60	42	63	47	64	42	54	41	59	37	60	39	61	39	64	42	61	39	66	34	51	46	57	45	59	49	63	42
14....	43	33	48	38	44	34	45	36	38	34	49	32	42	34	44	36	42	37	47	29	43	34	45	33	42	33	42	33
15....	40	23	44	28	49	24	49	30	44	28	43	24	45	22	46	23	43	19	49	34	51	25	47	23	42	33	42	
16....	49	20	52	19	48	22	56	34	52	30	51	23	53	24	54	22	49	23	59	16	59	20	62	22	65	20	51	28
17....	46	32	50	26	52	24	51	33	48	30	47	26	49	26	50	21	48	22	55	20	52	30	57	24	58	21	47	30
18....	53	22	56	25	57	29	57	34	55	33	53	26	59	27	57	26	56	25	62	17	49	20	61	22	62	22	54	31
19....	59	34	64	27	64	36	65	41	60	39	59	36	61	35	61	35	59	29	69	19	68	28	70	35	64	18	63	34
20....</td																												

TABLE 3.—*Maximum and minimum temperatures at selected stations for March, 1912. District No. 3—Continued.*

Date.	Kentucky.						Tennessee.										Decatur, Ala. \$§	Asheville, N. C.	Virginia.									
	Louisville.		Mays- ville. §§		Williams- burg. §§		Chatta- nooga.		Johnson City. §§		Knoxville.		Nashville.		Palmetto.		Sparta.		Waynes- boro.									
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
1....	60	39	52	44	75	48	67	42	63	52	66	41	62	39	57	39	68	43	70	42	54	53	62	39	64	45	65	38
2....	42	32	40	29	76	25	46	36	43	37	45	32	44	33	48	33	51	35	45	36	48	30	39	29	45	35	38	26
3....	50	27	54	20	70	30	52	31	51	20	49	26	52	26	57	23	54	21	55	20	53	24	53	23	47	24	48	24
4....	56	35	57	23	71	33	62	34	63	21	62	28	58	36	61	33	65	26	61	36	64	26	57	26	55	18	58	20
5....	67	52	71	25	73	35	63	47	69	23	66	35	69	45	68	46	71	38	68	48	68	32	63	30	68	22	65	24
6....	66	56	73	49	72	34	65	59	67	29	70	50	64	54	68	60	67	54	66	54	66	45	58	50	59	44	58	46
7....	56	43	55	53	68	35	60	48	58	56	60	49	55	43	62	45	62	50	61	45	58	51	57	47	60	56	59	46
8....	62	40	61	31	75	32	68	40	60	38	66	42	66	35	71	32	65	39	70	31	68	38	63	41	59	38	66	38
9....	60	42	58	32	80	30	67	42	62	38	62	42	61	41	66	32	62	30	67	29	63	31	55	39	59	39	51	34
10....	73	44	72	33	78	32	75	37	63	.....	70	34	75	40	74	40	73	30	74	34	73	34	67	32	66	37	62	32
11....	74	54	76	45	79	29	76	53	73	.....	74	48	75	56	75	51	75	34	76	51	74	40	74	37	70	36	66	40
12....	70	59	75	48	78	30	73	45	73	34	73	40	69	55	70	50	74	36	70	55	74	42	75	36	73	42	67	42
13....	67	45	60	49	79	30	67	48	73	39	67	48	68	45	66	47	66	50	70	47	63	50	69	48	68	38	68	40
14....	45	38	43	40	75	32	58	39	51	39	55	40	50	37	59	34	65	33	61	30	50	30	48	35	55	40	50	35
15....	46	34	45	34	68	20	51	35	43	34	48	34	51	30	52	26	48	26	54	22	53	31	40	31	40	32	35	30
16....	55	30	55	20	62	18	57	33	54	22	55	28	56	28	59	21	57	22	60	19	60	26	57	29	48	26	49	25
17....	52	33	52	20	60	19	57	35	54	23	54	29	54	35	64	26	53	24	56	24	58	27	50	27	47	34	47	32
18....	56	34	60	25	61	18	58	31	54	25	56	28	56	27	61	20	56	20	63	19	38	24	54	26	49	32	49	30
19....	66	42	66	25	60	20	66	31	59	24	62	28	68	30	68	31	66	22	68	26	67	24	59	26	61	25	55	28
20....	68	48	70	34	58	21	64	34	59	25	65	36	67	40	68	35	66	25	69	39	64	27	63	32	64	32	59	31
21....	66	45	67	33	59	19	62	39	60	29	61	33	69	35	70	36	66	29	70	47	67	29	60	28	59	22	60	26
22....	59	42	62	31	62	19	62	40	63	30	63	36	60	41	67	38	66	34	67	43	68	31	61	30	62	28	55	35
23....	54	36	59	26	53	21	64	41	60	32	62	37	58	37	64	31	56	30	62	30	65	36	62	34	55	26	57	30
24....	38	29	37	28	53	20	44	33	38	31	42	33	40	31	46	26	42	24	46	21	45	30	42	31	40	30	44	26
25....	43	31	39	28	55	21	47	31	44	31	46	30	48	23	44	30	58	17	47	24	41	29	33	29	33	25	33	25
26....	46	34	58	29	53	22	51	29	44	22	48	28	49	34	52	24	49	20	52	22	53	24	44	25	44	23	39	25
27....	40	27	39	23	50	19	40	30	40	24	38	26	40	28	42	25	41	20	39	25	37	27	39	24	40	25	39	25
28....	41	23	42	17	42	18	43	27	36	25	38	26	43	22	42	16	39	16	44	15	41	20	29	20	28	25	28	12
29....	53	33	54	17	52	16	51	24	43	11	49	21	53	30	52	26	46	17	54	25	47	20	49	12	45	8	44	12
30....	49	35	58	23	60	23	54	28	50	13	53	25	60	36	62	27	61	18	62	26	57	24	56	23	54	32	54	28
Mns..	56.0	38.7	57.0	31.1	65.2	25.6	59.0	37.4	55.5	29.6	57.4	34.5	57.9	36.6	60.6	33.2	59.1	29.9	61.3	32.6	58.1	31.7	54.9	31.3	53.9	31.4	52.0	30.2

a, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.

§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.